Letter to the editor

Toxicology and Industrial Health

Toxicology and Industrial Health
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DOI: 10.1177/0748233719876790
journals.sagepub.com/home/tih
SAGE

A paradigm shift at the heart of occupational health

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In the past, the central theme of worker protection in an occupational health setting was primarily centered on mitigation of physical hazards encountered in the workplace. Protective strategies included development of safeguards against excessive heat, noise, and the dangers of proximity to machinery. In addition, prevention of excessive exposure to toxic materials was an important goal. These materials included chemicals such as solvents, metals, and harmful gases. Regulation of dust levels is also important to prevent damage to lung function.

While measures to shield against these conditions remain a key feature of occupational health programs, a new type of worker hazard is becoming increasingly prevalent. This is the threat to health posed by an excessively prolonged sedentary state. Due to growing use of automated manufacturing techniques often controlled from a distance, there is a trend for diminished physical dangers in manufacturing. Concomitant with this, many newer types of employment require continuous immobility. This is commonly encountered in office work, call centers, and computer-related work. Twenty percent of all deaths of those older than 34 years have been attributed to lack of physical activity. While the hazards of such sedentary work are not as immediately apparent as those physical dangers encountered in an industrial, agricultural, or construction work setting, they pose a more subtle but equally dangerous threat.

The risk to health of prolonged inactivity is manifold and includes increased probability of cardiovascular disease, obesity, stroke, hypertension, and diabetes. Several of these disorders potentiate each other forming an unhealthy cluster, namely metabolic syndrome. The onset of such disorders is likely to be gradual and not dramatic at first, but extended lack of motion can lead to a major overall increase in mortality. Of course, a high degree of immobility need not be confined to the workplace, but the nature of one's employment is likely to be a major contributor to the physical inactivity, whereby the average American sits for 11 h daily. In a growing postindustrial society, this type of employment hazard is rapidly growing and the need to address it is urgent.

A growing role for the occupational health physician may then be to focus not only on environmental monitoring and dealing with acute emergencies but should involve actively engaging with this widespread issue whose seriousness is often underestimated. Recognition of the critical nature of this type of workplace hazard is an important first step. Allowing time for physical activity at regular intervals during the day and promoting weight loss programs are likely to need increasing emphasis. The introduction of standing desks is also likely to be beneficial. Consideration of these issues is an obligation of those responsible for ensuring a healthy workplace. Established a more healthy routine at work is likely to be reflected in an overall improvement in habits relating to increased activity and could have large societal consequences.

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